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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,927	10/31/2000	Seraphin B. Calo	YOR920000757US	9927

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EXAMINER

TRAN, LAMBERT L

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/702,927

Applicant(s)

CALO ET AL.

Examiner

Lambert L. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004 (Paper No. 7).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Amendment B, received on 10 February 2004, has been entered as Paper No. 7. This amendment is taken to supersede amendment A, Paper No. 6, received on 06 January 2004.
2. Claims 1-54 remain pending.
3. Applicant's arguments regarding the Specification lines spacing are persuasive. The requirement for new application papers has been withdrawn.
4. Applicant's amending of claims 21 and 30 has overcome the 35 U.S.C. 112, second paragraph rejection for said claims. This rejection, thus, is withdrawn.

Specification Objections

5. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. For example, on Page 8, a reference is made to:

<http://main-server.com/servlet/program1>

6. Applicant is required to delete the embedded hyperlinks and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 7, 11-12, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al., U.S. Patent No 6,341,311, hereinafter referred to as Smith, in view of what would have been obvious (within the scope of knowledge of an ordinary skill artisan) at the time the invention was made.

9. In regard to claim 1, 7, 20, Smith disclosed a method to direct data object accessing/executing client requests comprising the steps of:

redirecting to one server of a plurality of proxy servers at least one service request (a URL data object) received from a client for said at least one application [see Smith, ABSTRACT, and figure 2];

determining a set of programs required at said one server to fulfil said request for said at least one application [see Smith, ABSTRACT, lines 5-9]; and

executing said set of programs (data objects, programming objects) [see Smith, col. 7, lines 5-18].

10. Smith disclosed a plurality of proxy server arrays that handle and execute request having a common Array Membership List (AML) containing identifiable server characteristics. Smith did not expressly disclose *proxy servers at locations distributed throughout the network*, but Smith specifically suggested the advantage of server locality throughout the network by designating a field in the AML namely physical location [see Smith, col. 7, lines 32-38]. An ordinary artisan in the art at the same time the invention was made, would have been motivated to look to a way to implement Smith *proxy server arrays at locations distributed throughout the*

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network, utilizing the physical location field in the AML, since locality improves server performance.

11. Accordingly, it would have been obvious to one of ordinary skill in the client server architecture art at the time the invention was made to have installed *proxy server arrays at locations distributed throughout the network* for the purpose of improving proxy servers locality thus accessing the correct proxy server within the logical distributed array of proxy servers [see Smith, col. 4, lines 10-12].

12. For the rationale set forth above, claims 1, 7, 20, are rejected.

13. In regard to claim 2, Smith disclosed *examining a cache of programs to obtain the set of programs* [see Smith, col. 4, lines 46-49].

14. In regard to claim 3, Smith disclosed *cache is located at another server of said plurality of proxy servers* (distributed cache) [see Smith, col. 5, lines 5-17].

15. In regard to claim 11, Smith disclosed:

employing a local store in determining a first- set of programs present at the first proxy server; and
downloading a second set of programs from another server for said second set of- programs not present at said proxy [see Smith col. 7, lines 5-18, col. 10, lines 66-67, col. 11, lines 1-6, and col. 11, lines 14-25].

16. In regard to claim 12, Smith disclosed *redirecting (route) is based upon a priori knowledge* (deterministic algorithm) *of location of said set of programs* [see Smith, col. 13, lines 17-28].

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17. Claims 4-6, 8-10, 13-14, 17-19, 21-34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (6,341,311), in view of what would have been obvious (within the scope of knowledge of an ordinary skill artisan) at the time the invention was made, further in view of Barry et al., U.S. Patent No 6,615,258, hereinafter referred to as Barry.

18. In regard to claim 4, Smith disclosed the invention substantially as claimed. However, Smith did not expressly disclose *returning the results of the step of executing to the client*. In the same field of distributed computing, Barry disclosed a system and method for integrated customer interface for web based data management. Barry disclosed *returning the results of the step of executing* (translated back) *to the client* [see Barry, col. 9, lines 38-56]. An ordinary artisan in the art at the same time the invention was made, would have been motivated to look to a way to exchange information and data to the requesting client, since this information can help requesting client subsequent utilization of the network.

19. Accordingly, it would have been obvious to one of ordinary skill in the distributed computing art at the time the invention was made to have incorporated Smith's teachings of allowing a data object request made to a proxy server array to be routed to the proxy server having the desired data object [see Smith, col. 4, lines 26-30] with the teachings of Barry's, for the purpose of serving client request without making expensive query-response transactions with each and every proxy server in the array.

20. In regard to claim 5, Barry disclosed *forwarding a portion of the request that needs to be satisfied at another server to said another server* [see Barry, col. 9, lines 38-45].

21. In regard to claim 6, Barry disclosed *another server is a backend server* [see Barry, col. 36, lines 20-23].

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22. In regard to claim 8, Barry disclosed *obtaining parameters for execution from a backend server* [see Barry, col. 54, lines 52-55, col. 61, lines 51-54]; and *writing any resulting logging and error messages to said backend server* [see Barry, col. 51, lines 1-6].

23. In regard to claim 9, Barry disclosed *parsing the request* [see Barry, col. 61, lines 51-54].

24. In regard to claim 10, Barry disclosed *retrieving a proxylet-record* (proxy specific messages), *and looking up a field of said proxylet-record* (analyzing, validating formatted messages) [see Barry, col. 61, lines 26-54].

25. In regard to claims 13-14, the combination Smith-Barry disclosed:

said a-priori knowledge is deployed at a domain name server [see Smith, col. 13, lines 17-28, see Barry, col. 52, lines 24-36].

said a-priori knowledge is deployed at a backend server [see Smith, col. 13, lines 17-28, see Barry, col. 41, lines 54-63].

26. In regard to claim 17, Smith-Barry disclosed:

a (first) set of programs used in said at least one application, a (second) set of programs retrieved from a back-end server and executed locally to satisfy part of at least one request received from a client [The domain object module (DOM) handling the creation and query of Trouble Tickets execution and backend transactions, see Barry, col. 41, lines 47-53]; *a set of cached data associated with said set of programs* [see Smith, col. 7, lines 56-64]; *a set of information-management records for said set of programs* [see Barry, col. 4, lines 21-54]; and

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a cache Manager for maintaining the set of programs, the set of cached data and the set of information-management records in distribution of said at least one application (Transaction manager and cache management) [see Barry, col. 36, lines 23-28, Smith, col. 20, lines 25-34].

27. In regard to claim 18, Smith-Barry disclosed:

a first set of programs used for said at least one application, said (first) set of programs being distributed to at least one server of a plurality of proxy servers within the network [see Smith, col. 5, lines 7-17];

a second set of programs used for said at least one application, said (second) set of programs being executed locally by the backend server [see Barry, col. 36, lines 55-59, col. 41, lines 47-53];

a third set of programs used for said at least one application, said third set of programs to receive logging and error messages from the execution of said first set of programs [see Barry, col. 42, lines 13-23]; and

an accessing server to provide access to the first set of programs by any of the proxy servers [see Smith, figure 10, col. 19, lines 19-31].

28. In regard to claim 19, Smith-Barry disclosed *a request redirector for redirecting requests [see Smith, col. 20, lines 1-5].*

29. In regard to claim 21, 33-34, Smith-Barry disclosed:

redirecting one client for said at least one application, to a first proxy server from a plurality of proxy servers distributed throughout a network [see Smith, col. 5, lines 7-17, col. 7, lines 5-18, and also the rationale set forth above about the physical location in the Array Membership List];

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evaluating a request for said at least one application to determine a part that is executable at the first proxy server; and

executing said part at said proxy server [see Barry, col. 61, lines 51-61].

30. In regard to claims 22-24, Smith-Barry disclosed:

obtaining at least one program used by said at least one application enabling said step of executing, determining a location, obtaining values of parameters [see Barry, col. 61, lines 51-61].

31. In regard to claims 25-26, Smith-Barry disclosed:

performing at least one operation to satisfy said request; and writing any resulting logging messages to a backend server; backend server is managing said at least one program [see Barry, col. 41, lines 47-63].

32. In regard to claims 27-29, Smith-Barry disclosed:

said location is the location of a second proxy server; obtaining a proxylet-record (formatted messages and parameters) for said request; and looking up at least one field in the proxylet-record [see Barry, col. 54, lines 52-62, col. 61, lines 46-61].

33. In regard to claim 30, Smith-Barry disclosed:

redirecting a second request from said first client to a second proxy server [see Smith, col. 4, lines 26-45, see Barry, col. 54, lines 23-67].

34. In regard to claim 31, Smith-Barry disclosed:

redirecting a second request received from a second client to said first proxy server [see Smith, col. 4, lines 26-45, see Barry, col. 54, lines 23-67].

35. In regard to claim 32, Smith-Barry disclosed:

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redirecting a second request received from a second client to a second proxy server [see Smith, col. 4, lines 26-45, see Barry, col. 54, lines 23-67].

36. Claims 15-16, 35-54, are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, in view of what would have been obvious (within the scope of knowledge of an ordinary skill artisan) at the time the invention was made, further in view of Barry, in further view of Swildens et al., U.S. Patent No 6,484,143 hereinafter referred to as Swildens.

37. In regard to claim 15, Smith-Barry disclosed *proxy servers distributed throughout the network, an application distributor, an information-management recorder, an execution device* [see Barry, col. 9, lines 10-22, col. 13, lines 36-67, col. 14, lines 1-9, col. 42, lines 14-23].

38. The combination Smith-Barry disclosed the invention substantially as claimed. However, Smith-Barry did not disclose the use of a load balancer. In the same field of endeavor, Swildens disclosed:

a wide area load balancer for distributing at least one request from at least one client to a particular proxy server from among a plurality of proxy servers [see Swildens, col. 4, lines 45-55, col. 15, lines 19-33]. An ordinary artisan in the art at the same time the invention was made, would have been motivated to look to a way to balance the load among proxy servers because each addition of another proxy server onto the array of proxy servers will in fact increase the amount of communication between the different proxy servers for all array members [see Smith, col. 4, lines 51-56].

39. Accordingly, it would have been obvious to one of ordinary skill in the distributed computing art at the time the invention was made to have incorporated the combination Smith-

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Barry teachings with Swildens' teachings of using a load balancer among the proxy servers for the purpose of improving the transfer of information over a network [see Swildens, col. 1, lines 62-63].

40. In regard to claim 16, Barry disclosed *a request forwarder for forwarding to another server any portions of said at least one request which have to be executed at said another server* (remote servers), [see Barry, col. 3, lines 64-67, col. 4, lines 1-2].

41. In regard to claim 35-49, Smith-Barry disclosed:

Means for selecting proxy server to be closer to a client requesting service [by utilizing Smith's physical location field in the Array Membership List];

Backend server to provide administrative control (session services, communication services)

[see Barry, Figure 1, item 16];

Storing at least a portion of said programs (distributed store of data objects) *on each proxy servers* [see Smith, col. 7, lines 5-18];

Distributes at least a portion of said programs (data object) [see Smith, col. 7, lines 5-18];

Backend servers in communication with proxy servers, and providing services [see Barry, Figure 2, legacy backend item 40].

42. In regard to claim 50-54, Smith-Barry disclosed:

Parameter list field passed to the program, contents are different [Analyzing, validating formatted messages and passing them between web server and application server. Since the web server is Java Applet originated, the parameters will be dynamic and different for different proxy servers within the network. See Barry, col. 61, lines 50-67].

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Time specification provision (selected criteria) [see Barry: Report Requestor, scheduling and Report Scheduler, col. 23, lines 50-67].

The logger identifies a location [This is yet another variation utilization of the physical location field in the Array Membership List];

43. Since all the claims limitations were disclosed by the combination Smith-Barry-Swildens, and what would be obvious to one of ordinary skill in the distributed computing art at the time the invention was made, claims 1-54 are rejected.

Response to Arguments

44. Applicant's arguments filed on February 10, 2004 (Amendment B, Paper No. 7) with respect to claims 1, 15, 21 have been considered but are moot in view of the new ground(s) of rejection. In addition, Applicant's assertion about the amended feature "*proxy servers at locations distributed throughout the network*" is addressed in detail in Paragraph 9-10 set forth above in this Office Action.

Conclusion

45. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

46. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


47. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lambert L. Tran whose telephone number is (703) 305-4663. The examiner can normally be reached on M-F at 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack B Harvey can be reached on (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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48. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L.L.T
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GAU 2144
April 13, 2004


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